

10. [10 points] Ivanka is a student at a nearby college. Let $C(h)$ be the total tuition, in thousands of dollars, the college charges her if she takes h credit hours, and let a be the average number of credit hours students take at the college.

For each of the following, pick the ONE expression from the list of “Answer Choices” that best represents the described quantity. Clearly write the capital letter of your choice on the answer blank provided.

Answer Choices

- | | | | |
|----------------|---------------|------------------|--------------------|
| A. $C(3)$ | F. $C(a) + 3$ | K. $3C^{-1}(a)$ | P. $C^{-1}(3a)$ |
| B. $C^{-1}(3)$ | G. $C(a - 3)$ | L. $C^{-1}(a)/3$ | Q. $3C(C(a))$ |
| C. $C(a)$ | H. $C(a) - 3$ | M. $C(a)/3$ | R. $C(3C^{-1}(a))$ |
| D. $C^{-1}(a)$ | I. $3C(a)$ | N. $C(a/3)$ | S. $C^{-1}(3C(a))$ |
| E. $C(a + 3)$ | J. $C(3a)$ | O. $C^{-1}(a/3)$ | T. $C^{-1}(C(3a))$ |

- a. [2 points] Ivanka’s tuition (in thousands of dollars) if she takes a total of 3 credit hours

Answer: A. $C(3)$

- b. [2 points] Ivanka’s total tuition (in thousands of dollars) if she takes 3 credit hours more than average

Answer: E. $C(a + 3)$

- c. [2 points] Ivanka’s tuition (in thousands of dollars) if she takes one third the average number of credit hours

Answer: N. $C(a/3)$

- d. [2 points] The amount (in thousands of dollars) that Ivanka pays for tuition if she takes the average number of credit hours but has a scholarship that covers three thousand dollars of her tuition

Answer: H. $C(a) - 3$

- e. [2 points] The number of credit hours Ivanka takes if her total tuition is three times as much as the tuition for taking the average number of credit hours

Answer: S. $C^{-1}(3C(a))$